

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2005/001630

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 A61K38/19 A61P35/04 G01N33/50		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC 7 A61K A61P		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, EMBASE, BIOSIS, CHEM ABS Data		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 2004/045532 A (CHIRON CORPORATION) 3 June 2004 (2004-06-03) the whole document	1-64
X	DATABASE WPI Section Ch, Week 200171 Derwent Publications Ltd., London, GB; Class B04, AN 2001-613857 XP002347324 & JP 2001 233784 A (MORINAGA MILK IND CO LTD) 28 August 2001 (2001-08-28) abstract ----- -/--	1-64
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family		
Date of the actual completion of the international search  29 September 2005		Date of mailing of the international search report  17/10/2005
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  Winger, R

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 98/39449 A (CHIRON CORPORATION; DWARKI, VAVARANI; MANNING, WILLIAM, C; KOTHS, KIRS) 11 September 1998 (1998-09-11)	1-64
X	page 36, line 22 - page 37, line 28; claim 1; example 5 page 47, line 17 - page 48, line 5 -----	26,27, 43,49
Y	EP 0 955 056 A (CHIRON CORPORATION) 10 November 1999 (1999-11-10)	1-64
X	paragraphs '0028!', '0094!' - paragraph '0114!' -----	26,27, 43,49
Y	WO 90/01942 A (GENETICS INSTITUTE, INC) 8 March 1990 (1990-03-08) page 1, line 27 - page 2, line 9; examples 2-4 -----	1-64
Y	EP 0 955 365 A (CHIRON CORPORATION; REGENTS OF THE UNIVERSITY OF CALIFORNIA; REGENTS O) 10 November 1999 (1999-11-10) cited in the application examples 9-12 -----	1-64
Y	MIYAMOTO TAKESHI ET AL: "Differentiation and function of osteoclasts." THE KEIO JOURNAL OF MEDICINE. MAR 2003, vol. 52, no. 1, March 2003 (2003-03), pages 1-7, XP002347322 ISSN: 0022-9717 abstract; figure 5 -----	1-64

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## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
Although claims 1-7, 12-25, 28 and 29 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 2004045532	A	03-06-2004	AU 2003291002 A1 CA 2505994 A1 EP 1572106 A2	15-06-2004 03-06-2004 14-09-2005
JP 2001233784	A	28-08-2001	NONE	
WO 9839449	A	11-09-1998	AU 6458898 A EP 0973904 A1 JP 2001517079 T	22-09-1998 26-01-2000 02-10-2001
EP 0955056	A	10-11-1999	NONE	
WO 9001942	A	08-03-1990	AU 4219689 A	23-03-1990
EP 0955365	A	10-11-1999	NONE	